NEW ENGLAND FARMER.

Published every Saturday, by THOMAS W. SHEPARD, Rogers' Building, Congress Street, Boston; at $2,50 per ann. in advance, or $3,00 at the close of the year

VOL. I. BOSTON, SATURDAY, NOVEMBER 23, 1822. No. 17.

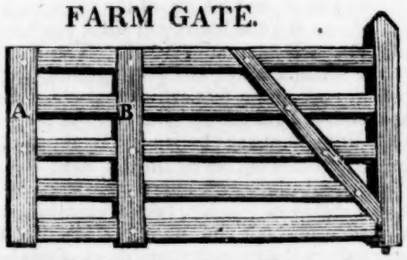
FOR THE NEW ENGLAND FARMER.

ON THE CONSTRUCTION OF GATES.

If farmers were to calculate the time employed in taking down and putting up bars, compared with that of opening and shutting gates, they would, on principles of economy, substitute the latter for the former; at least wherever they have frequent occasion to pass. And there are few farmers, who could not make their own gates in the leisure of winter. A great proportion of gates are not so well constructed as they might be. The most common fault is the fixing of the brace to run from the top of the hind piece of the gate, sloping towards the fore end. Such gates always sag, and their fore ends scrape the ground. Reverse the position of the brace, and then, if the gate be well made of seasoned stuff, it will never sag. The following sketch of such a gate, with the notes subjoined, will render farther description unnecessary.

A FARMER.

FARM GATE.



The Har-tree 3½ inches thick, and 4½ or 5 inches wide.

The brace 2½ inches wide and 2 inches thick.

The upper bar 7 inches wide.

The three next bars, 6 inches wide.

The lower bar 7 inches wide.

The gate may be hung with hinges, or hooks and eyes, or with one hook and eye at top, and a gudgeon at the bottom of the har-tree, to turn in a hole, drilled into a hard stone, to be set close to the foot of the gate post. In the latter case the lower end of the har-tree should be rounded and receive a ring or narrow band to prevent its splitting.

The brace, besides the rivets, (one through each bar) should further be fastened to the bars by nails from the other side.

The brace, with its rivets and shoulders, renders it impossible for the upper bars to sag; and the two perpendicular pieces of board A. B. being riveted and nailed to the lower bars, effectually support them.

Full inch boards, even of white pine, will be strong enough for the bars; although hard wood or spruce would be preferable. If made of oak, inch boards would be amply sufficient.

The brace and har-tree should be of white oak, or hard pine.

ON THE USES OF THE COMMON NETTLE.

If we mistake not a patent has been granted in the United States for the exclusive right of making cloth of the nettle. Its uses, however, appear to have been well known in Europe for many years past. Dr. Anderson says (Recreations, vol. iii, p. 149:) "Some poor women, fishermen's wives near Leith, in Scotland, gathered some nettles, steeped them in water like flax, dressed it, and spun it into coarse yarn, of which a kind of canvas was made. As their husbands were in the practice of dredging oysters, and sending them to Glasgow in canvas bags, some bags for this purpose were made of the nettle canvas, which was found to answer the purpose much better than that made from hemp, as it was much longer before it rotted. It should be steeped and dressed in the same way as flax, but it requires to lie longer in water before it be fit to be dressed. It is harder to the touch than cloth made of hemp or flax."

Dr. Anderson, however, doubted whether it could be made profitable to cultivate this plant for use. He observed that "unless it be upon a very rich soil, it is a dwarfish plant; it would therefore be more difficult to obtain it in *quantities*, than either flax or hemp." Dr. Anderson thought, likewise, that the steeping of it would require a great degree of accuracy.

The medical virtues of the nettle are thus described in an English magazine: "In the form of a strong decoction or infusion taken in the quantity of a pound a day it is a most valuable strengthener of general or partial relaxation. In that of a weak decoction or infusion, it proves an admirable deobstruent in impurities of the blood, and in obstructions of the vessels. And in that of expressed juices, taken by spoonfuls as the exigency of the case requires, it is the most powerful styptic for internal bleedings known. Externally applied as a fomentation or poultice, it amazingly discusses inflammation and resolves swellings. In the common sore throat, thus applied, and internally as a gargle, dependence may be safely put on this common plant."

It is said that the Russians obtain a green dye from the leaves, and a yellow dye from the roots of the nettle.

ACORNS FOOD FOR SWINE.

The hogs that are fed upon the acorns that they gather in the woods of Germany and Poland, are reckoned to yield the finest bacon of any in Europe; and it is to this that most people ascribe the superior excellence of Westphalia hams. So says Dr. Anderson, and farmers who live in the neighborhood of oak forests might easily make experiments which would decide whether acorns are equal to Indian corn, (which we doubt) or what proportionate value they bear to Indian corn. In Virginia sweet apples and peaches, we have been told, are used for feeding swine.

CLEARING OF LANDS.

But little need be said on this subject; as he who has to undertake the clearing new lands will acqure more knowledge, from practice, of the best methods of subduing our heavy forests, than from any essay on the subject. He will find that the essential point is to put his shoulder to the wheel, and persevere undauntedly; and in a few years he will find his exertions amply compensated, by the pleasing scenes and profitable improvements which shall have been made around his dwelling.

When new Settlers first go into the woods, they have to spend much valuable time in hunting up their oxen and milch cows, which, for want of an enclosed pasture, have to run in the woods; and to remedy this, as soon as possible, we would propose the following:—About the first of June, take a suitable piece of ground, cut out the bushes, and all the small growth of timber which shall be under a certain size, say a foot over at the but; pile all the brush round those trees which are left standing. In a dry time, in the month of August, set fire to them, and the fires will kill the trees left standing; then pile and burn what lies on the ground, which is soon done, and in due season harrow in a crop of wheat or rye, and in the following spring sow the ground over with herdsgrass. The crop of wheat or rye, sown in this way, will be nearly as good as if the timber were all taken off; and the year following the ground will afford the requisite supply of pasture and hay. When the limbs of the standing trees begin to rot and fall off, cut the whole down and let them lie there; as the pasture will not be injured, but rather eventually benefitted, by the trees lying and rotting upon it. This method of killing trees by fire is, however, only recommended where they are such as cannot be killed by girdling; such as beach, maple, basswood, &c.

New Settlers, who will take this method of providing a supply of pasture and hay, will find their account in two ways: It is turning the grounds to immediate profit, with the least possible expense: and the surplus of hay and pasture will command an extra price; as those articles are always scarce, during the commencement of new settlements.—*Farmers' Assistant.*

Improvement in the Dasher of the Common Churn.

This dasher turns on the handle, by being fixed to it by a pivot. It consists merely of two cross pieces, suppose three inches square, put together, by being let into each other, in such a manner as to form four wings, which are cut beveling on each side, at an angle of forty-five degrees, so that they stand diagonally; the whole being very similar to the wings of the little wind-mills (so called) which are set up on poles, to be turned by the wind.

As this dasher goes down in the cream, it turns one way, on its pivot in the lower end of the handle, and as it comes up, it turns the other way; and this produces an agitation of the cream better calculated for producing the butter, than any method ever yet known. It is so efficacious in its operation, that the churning must be performed moderately, or the butter will come too soon, and be *swelted*, as it is technically called by some.

Mr. Fisher, the inventor of this dasher, obtained a premium in England for his discovery. The churning with this dasher is not attended with that splashing of the milk, so troublesome in the churn of the common dasher.—*ibid.*

From the New-York Spectator of Nov. 13.

NEW-YORK CATTLE SHOW AND FAIR.

"The task of making improvement on the earth, is "much more delightful to an undebauched mind, "than all the vain-glory which can be acquired from "ravaging it by the most uninterrupted career of "conquests."—WASHINGTON.

That the permanency of the prosperity of a nation, next to the liberality of its institutions, depends on its Agricultural and Commercial pursuits, is a position which we believe few will be disposed at this time of day to dispute. Altho' it may be said of Great Britain, that the glory she has acquired has been the fruit of her victories; yet if the cultivation of the soil, and her extensive manufactories had not yielded the *means* of prosecuting the wars in which she was engaged, she would have had no pre-eminence to boast of, when compared with other European States. It is from the *soil*, in fact, that every thing is derived which can be converted into a useful domestic purpose, or form the medium of our obtaining many of the necessaries of life from other parts of the globe. Without agriculture, we should neither have bread to eat, nor clothes to put on. Without agriculture our commerce would sink into oblivion: and without agriculture, we would become as degenerate a race as the savages, who inhabited the woods and wilds, when this country was first visited by Europeans. A deep impression of the importance of this subject, gave birth to Agricultural Societies. These created funds, for the purpose of encouraging improvements, and bestowing rewards on merit, which it was not in the power of individuals to provide; and, in consequence of the judicious application of these funds, the most beneficial effects have resulted in all parts of the state: though we are not apprehensive that these institutions will be abandoned, we cannot shut our eyes to the apathy which has appeared in some counties, on a subject of such vital importance to the community. We trust, that nothing of the kind will ever be discovered amongst us; but, that those who really possess the means of contributing, will, instead of relaxing in the patriotic work, increase the support which they have been in use to afford; always keeping in mind, that "the task of making improvement on the earth, is much more delightful to an undebauched mind, than all the vain-glory which can be acquired from ravaging it by the most uninterrupted career of conquests."

We have thought the foregoing remarks not inappropriate by way of an introduction to a brief account of the New-York Cattle Show and Fair, for the exhibition and sale of live-stock, agricultural implements, and goods of domestic manufacture. The exhibition commenced, as our readers have already been informed, at Harlæm, yesterday morning, and closed at one o'clock this day. The weather has been remarkably mild for the season, and notwithstanding the distance from town, the exhibition was better attended yesterday than we had anticipated. As we have given below the general Report of the Society, together with the pertinent address delivered this day at 12 o'clock, by Dr. MITCHELL, one of the Vice Presidents, we have but little room to detail the particulars that came under our own observation.

The exhibition of live stock, was on the whole highly creditable to this part of our state. We never witnessed a finer display of horses. Besides a great number of colts of blood, there were upon the ground the famous horse Duroc, Old Hickory, and the beautiful Arabian, the Bagdad, imported last year by the Messrs. Barclays. The fat cattle were very fine, particularly one yoke from Westchester, and a lot brought upon the ground by Mr. Fink, of Orange county. Of cows there was but a poor display; and only two bulls that would be passable among judges of black cattle in England. Of working cattle, we saw nothing to compare with a yoke of two year old steers, brought from Poughkeepsie, and owned by Mr. John I. Copeman, of that place. There were some very fine sheep—native and merino; but no hogs deserving of notice.

The display of Goods of Domestic Manufacture, was extensive and exceedingly fine, both as it regards variety and quality. We cannot particularize the different articles, nor speak of their respective qualities. But there were broadcloths and cassimeres fit for any republican to wear; and if fit for republicans, they are certainly fit for any body else. The cotton goods from the Matteawan Manufactory, embracing shirtings, sheetings, and ginghams of every variety, presented a highly gratifying spectacle. We noticed also several rolls of flannels of a superior quality, and some diaper table linen manufactured by Mr. David Auchinvole, of Hudson, which, as we have before said, is quite good enough for freemen.

There were no articles, perhaps, which attracted more attention than the imitation Leghorn hats. We have examined many fine hats, of American and foreign manufacture; but we are free to say that there were three here presented to the public, which in every point of view, exceed any thing of the kind that has before fallen under our observation. The hat made by Miss Julia Harrison, of North East, Dutchess county, took the first premium; that of Miss Hedges, of Easthampton, (L. I.) the second; and that of Miss Babcock, of the same place, the third. There were several others, executed in a creditable manner, but only three were entitled to premiums.

Mr. Obadiah Parker, of Greenwich, exhibited some fine specimens of Upland and Sea Island Cotton, raised in his garden the late season; and there was another beautiful parcel, raised by Mr. M. Rogers, of Jericho, (L. I.) together with a pair of handsome cotton stockings, made from the same. But we will let the officers of the society speak for themselves.

The Society formed in procession at Deyo's Hotel, at 12 o'clock, and proceeded to the Church where an address was delivered by DR. SAMUEL L. MITCHELL.

(*This address shall appear in our next.*)

From the American Farmer.

RECEIPT FOR PICKLING BEEF.

October, 1822.

DEAR SIR,—You have published a number of excellent receipts for curing beef, but as none of them contain the alkaline ingredient, on which the high fame of my grandmother's pickle has safely rested for the last half century, and which is believed to make it superior to any other, I send you the whole recipe, as worthy of preservation in your valuable journal, and of general adoption. Several writers have asserted that boiling the pickle will harden the meat; I must, from experience, dissent from this opinion.—Boiling and thus purifying the salt and water, will certainly make a pickle that will bear warm weather better than pickle which has not been boiled—and I am convinced that the hardening of beef has been improperly ascribed to this practice. Whenever the hardening takes place, it is a consequence flowing from some other cause, and not justly attributable to the boiling.

Your Obedient Servant,

SWEET PICKLE.

MY GRANDMOTHER'S PICKLE.

The Beef, as soon as the butcher has finished dressing it, should be hung in a cool place, and become thoroughly cool to the marrow—then cut it up, and cleanse every piece, of blood, &c. in pure cold water; then let the pieces intended for hung beef, the briskets, &c. be lightly rubbed with blown salt, and laid in a pickle tub, that has been nicely cleansed; on these lay the rest, the thickest pieces first, till all, to be pickled, are snugly packed in. If the weather will permit it, the beef will be tenderer and nicer by being suffered to hang two or three days in quarters, or to remain 24 hours in the pickle tub, before the pickle is poured on it.

Take 12 or 14 gallons of pure water (if not pure, make it so, by boiling well after the salt has been put in, and taking off the scum as it rises) and stir in good blown salt till it produces a brine, that will bear an egg well. The day before the salt and water are put together, put on a pot of pure water, into which put clean wood ashes, and boil till they produce a good ley, that feels a little slippery between the thumb and finger; put this ley away till the next day to settle; it will then look like pure water. Measure one gallon of this ley, taken up clear, and pour it into the salt and water, after that has been made to the proper strength, or if you boil, put in the ley directly after boiling. Also put in at the same time four ounces of saltpetre beat fine; and one pound of brown sugar, or a pint of molasses.—Stir the ingredients well together and let them stand till next day; then carefully scum off every thing, that has risen, and pour this pickle on the packed beef. The beef ought to have on it a barrel heading, or circular piece of wood to fit the size of the pickle tub, so as just to move up and down, and on this piece of wood put a flat, heavy, clean stone to keep all down snug in pack, and the pickle ought to cover the beef completely, and remain well above the top piece. In pouring the pickle on, do it carefully and steady, and reject any sediment that may appear at the bottom of the vessel, in which you have made it. In butchering and handling the meat, and in every part of the process, attention should be paid to perfect neatness and cleanliness.

The above quantity of pickle is sufficient for 500 weight of beef. If more beef is to be pickled at once, the quantity of pickle must be increased accordingly, observing to keep up the same proportion of all the ingredients.

N. B. The boiling the salt and water in every instance is the safest, especially if the pickle be made before the end of November, or after the middle of February, and is not much trouble, even though you may not have a boiling vessel, that will hold more than half or a third of it at once.

Salem Alms-House.—One thousand bushels of Corn, besides an abundant supply of Potatoes

and other vegetables, have been raised at the Alms-House Farm the present season. The important improvements constantly making at this interesting establishment; the order and regularity with which every thing is conducted; and the neatness and comfort every where seen within its limits, reflect great honour on the present worthy Overseer, and entitle him to the lasting gratitude of the town.

Mr. Upton, whose mind is ever bent on some plan of usefulness, has suggested, (and we think the suggestion entitled to serious consideration) that a Dam might be built from the Alms-House Wharf, across Collins' Cove, to the nearest point on the opposite side, which would afford suitable sites for Mills of various kinds, and be of great benefit to the town as well as individuals—it would also be a very convenient public way between Beverly, Bridge street, &c. and the lower parts of the town. The stone and gravel necessary for the construction of the Dam, are to be had in great abundance near the Alms-House, and by employing the men, teams and gondolas of the establishment. it might be executed at small expense.—*Essex Register.*

From the New York Statesman.

As you profess to devote a portion of your paper to the interest of agriculture, I take the liberty of communicating some facts relative to the turnip culture, which I have prosecuted this year to a greater extent than before.

My farm, on the Albany commons, is a sandy loam, and, so far as I can judge, very much resembles the celebrated turnip soil of Norfolk, in England. The idea, which is prevalent in many places, that the turnip requires a moist, peaty, or very rich soil, is erroneous.—It is equally an error that they will not grow on old lands, provided they have a dry and sandy soil. In Norfolk there have been raised five crops on soils which were eight-ninths silex; and perhaps they do the best where the sand does not constitute less than 70 per cent of soil. I find I grow the best crop on the sides and tops of my most sandy hills; where in places more moist, and abounding in more vegetable matter, they are of diminished size, ill flavoured and stringy. Hence it has become a primary rule in my practice to sow this crop upon my lightest soils.

For table use, the later the turnip is grown the better. Those later sown, are more crisp, juicy, firm, and better flavoured, than those which are maturing during the heats of September. I therefore sow late; the common sorts from the 25th July to the 6th August, and the Swedes early in July.

As a crop for cattle food, I have yet but little experience, except with the ruta baga. Of the utility and profit of these I am fully satisfied.—They are raised as cheap as Indian corn. The average product is from 500 to 600 bushels. In a root cellar, or in piles of 100 bushels, buried up on the surface of the ground, they keep perfectly well, and are fed without being cut to neat cattle, with as little labor as any food.

I have raised turnips five years with uniform success, and always as a second crop.—You probably recollect the high reputation they obtained in the Albany market as a table vegetable. This year I have grown seven or eight acres, of different kinds, viz: the flat red top and green top, the Norfolk white, the Aberdeen yellow, the globe and ruta baga; and they all prove excellent of their kind—the two first yielded at the rate of 760 bushels per acre.—The whole were raised on ground on which I had previously taken (the same year) clover, rye, wheat, flax and peas. Most of the ground had a light dressing of manure, which was ploughed under, and the seed sown broadcast, and harrowed in. They were thinned and weeded with the hoe once only.

I contemplate sending a few hundred bushels to your market in a day or two, when I beg you will do me the favor to call at the boat and view them. I think they are not surpassed for beauty and goodness by any which I ever saw.

Your obedient servant,

JESSE BUEL.

BREED OF HORSES.

The fine exhibitions of this animal at the late Cattle Show in this county, have led to much conversation, and excited a laudable spirit of emulation; and it is hoped a subject of so much importance to the community will continue to attract public attention, until the state is stocked with a new race of horses. Although the first premium was awarded to the celebrated *Duroc*, of Dutchess county, yet the beautiful Arabian *Bagdad*, imported and owned by Mr. Barclay, of this city, is said, by good judges, to be little if any inferior to his elder and successful rival; and the most sanguine hopes are entertained, that the stock from Bagdad will contribute much to the improvement of our breed of horses. As the two competitors are kept in different parts of the state, the interests of their respective owners can in no way interfere.—*ibid.*

From the Old Colony Memorial.

That the following may receive the notice which it deserves, we take the liberty of stating, that it is received from the Rev. Mr. Allen, of Pembroke, who has used it on the sides and roof of all of his buildings, except the house in which he resides. At a very little distance, the paint on the latter cannot be distinguished from this cheap, and ornamental mixture. Beside the neat appearance it gives, it may be recommended by the arguments of economy, as protecting the wood from the vicissitudes of weather, and of precaution, in guarding against fire. The latter should be an argument of great weight in this town. We can in no better way express our gratitude for the signal favour of Providence, in saving us from the ravages of this destructive element, than in guarding in every convenient and practicable way, against the mischief it may occasion.

This cement is designed as a paint for the roofs of houses. It answers all the purposes of common paint, and also protects the roof from fire. Those who are now erecting new houses, or are about to paint the roofs of old buildings, would do well to try it. The expense of painting a roof in this way would be much less than the common method.—The cement becomes very hard and glossy, and is said to be more durable than the best kind of paint. The following is a receipt for making it:—Take as much lime as usual in making a pail full of whitewash; let it be sifted in the pail nearly full of water; in this put two pounds and a half of brown sugar, and three pounds of fine salt—mix them well together, and the cement is composed. A little lamp-black, yellow ochre, or other colouring commodity, may be intermixed, to change the colour of the cement, to please the fancy of those who use it.

From the Northampton Gazette.

Saxon Sheep.—Our enterprising townsmen, Isaac C. Bates, Esq. and Col. James Shepherd, have recently imported two Saxon bucks, which have arrived in town. They were purchased in Saxony for these gentlemen more than a year since, and selected by a good judge, as the excellence of the animals evinces. It is well known that Saxon wool commands a higher price in the English market than Spanish. It is the material of which the superfine west of England cloths are made. The growth of it, therefore, in this country, is important to the agricultural and manufacturing interests. These bucks are of the merino race of sheep, but improved. They are remarkable for the fineness, delicate softness, and singular uniformity of their fleeces, and are an acquisition to the country, for which the proprietors are entitled to a meed of thanks.

Sheep.—In the Report of the Committee on Sheep at the Worcester Cattle Show, it is stated that England and Wales possess 26 millions of Sheep, the annual produce of whose wool is 27 millions of dollars. England imports from Spain about *one fifteenth* of the whole quantity of wool which she manufactures. *Three fourths* of the wool wrought by the woollen manufactories of the United States is the product of foreign soil.—*ibid.*

Extraordinary Product.—Mr. Edwin Lathrop, of Hawley, raised the past season *one hundred and eighty summer squashes* from one seed.—*ibid.*

A new Method of heading Cabbage in the Winter.

Last fall, at the usual time of taking in Cabbages, I had a number well grown, but had no appearance of a head. I dug a trench on the southern declivity of a hill, about 18 inches wide, and 20 or 22 inches deep, and took 86 cabbages of the above description, and set them out in the bottom of the trench, in their natural position, with the roots well covered with sand: I then filled the trench with straw on each side of the cabbages, and laid straw over the tops of them, to prevent the sand from getting in; then placed a rail over the middle of the trench, to prevent any pressure on the cabbages, and then completed the work by throwing on more straw, and forming a ridge of sand over the whole, to keep out frost and water. In the latter part of March, I opened the trench and took out the cabbages, and found each one with a common sized head, white, solid, and well tasted.—*Anon.*

Easy method of breaking Glass in any required direction.—Dip a piece of worsted thread in spirits of turpentine, wrap it round the glass in the direction that you require it to be broken, and then set fire to the thread, or apply a red hot wire round the glass, and if does not immediately crack, throw cold water on it while the wire remains hot. By this means glass that is broken may often be fashioned, and rendered useful for a variety of purposes.—*Eng. pap.*

From the National Ægis.

MINERALOGICAL.....No. II.

To obtain a knowledge of the properties of those bodies which are found on the earth, or beneath its surface, which are destitute of an organic structure; to distinguish and bestow names upon them, and to give to them a suitable description and an orderly arrangement, are the objects of the science of Mineralogy. Hence results its connexion with Agriculture. The Farmer employs many substances, as manures, which belong to this comprehensive division of the family of nature. The soil which he tills, is composed of various constituents and filled with numerous fragments, which are properly to be considered as minerals. To become acquainted with the *names* which have been bestowed on these, without studying the *qualities* they possess, is a trifling, fitted only for the amusement of the indolent. To discover that the most precious of gems, is called the Diamond, and that one of the most valuable of manures, is denominated Marle, is making but a small advance in improvement. The practical man will consider how the value of the former may be enhanced and its beauty increased by its susceptibility of a polish, and will reflect on the economical application of the latter, to the renovation of lands exhausted by repeated crops, or its power of increasing the fertility of those which are still productive.

Whether that mass of mineral ingredients combined with various decomposed animal and vegetable matter, spread over the surface and called soil, serves only as a support for plants and a medium by which nourishment is transmitted to them, or whether it prepares and furnishes their food, in either view, its constitution is equally deserving of attention. It has been proved by experiment that particles held in solution pass unchanged into the roots of plants. Vegetables have been made to grow in solutions of salts, and examination has shown that they were tinged with the peculiar colors of the liquids in which they were immersed, and analysis detected that the salts themselves had been absorbed. This has been the case when the mixtures employed were of the most poisonous and deleterious nature. If plants then, have not *discernment enough* to select that food which is proper for their support and reject that which is destructive to their existence, it is the more necessary that the cultivator should remove from them the means of committing a kind of suicide. The noxious elements, which render the soils in which they abound unfit for crops, are few. They are generally such as may be neutralized, or converted into agents of fertility by appropriate applications and dressings.

It is not unusual to find the surface of standing waters in meadows, where the earth is apparently rich, mantled with a floating incrustation of various hues. Such an appearance is an indication of the presence of Iron combined with Sulphur, in the proportions which form the sulphate of that metal, well known by the more familiar name of Copperas. The same substance is detected by its color, or by its taste on higher lands. Wherever it exists it is an unfailing cause of sterility. By the application of Carbonate of Lime the action of this pernicious acid is not only neutralized, but the sulphuric acid, leaving its former combination, unites with the lime forming the sulphate of Lime or Gypsum. In this manner qualities which are injurious to vegetation, are converted into others which are favorable to it. Similar examples, would all demonstrate the utility of that science which furnishes information on the constituents of soils, and provides us with the means of supplying their defects, correcting their noxious qualities, and adding to their productiveness.

A detail of the several processes, which are employed for the analysis of soils and discovering the minerals of which they are composed would exceed our assigned limits. Nor is such an explanation now necessary. It has been already given by Professor Davy, a man in whose foot-steps no successor may follow and find any thing remaining for improvement. The object of our remarks is merely to recommend this department to *practical* men. It is sufficient to say that by following the clear and perspicuous directions which he has laid down, results are arrived at with the greatest ease. No long previous acquaintance with Chemistry is necessary. A few simple principles comprehend all the secrets of this science in its connection with agriculture. None need be deterred from pursuing it by the apprehension of encountering insuperable difficulties. The little study which it will require, the small portion of time which it may demand, will be abundantly remunerated in the increase of knowledge, in the amelioration of the earth, and in the improvement of its harvests.

A FARMER.

From the National (Vermont) Standard.

WHEAT

Is one of the most valuable productions of our soil, and the only one on which we can generally safely calculate for exportation at a profit. In a very considerable portion of this state, so large a proportion of our lands have already been cleared, that very little of this grain will, in future, be raised upon newly cleared lands. Most of what shall be hereafter raised, must be raised on lands which have been sometime under cultivation. On such lands, this valuable grain is many times liable to injury from *the blast*. A certain remedy for this injury is very desirable. In order to stimulate our farmers to an inquiry into the cause which tend to produce this injury, and to exert themselves to search out a remedy, we present them with the following extract from Dr. Dwight's travels in New-England, recently published, which contains his theory on the subject of the blast in wheat. Dr. Dwight, in his various tours through the New-England States visited almost every town, and became intimately acquainted with the different modes of husbandry pursued in each. From his known talents, information and particular attention to those subjects which he considered of public interest, of which agriculture was one of the most prominent, any observations from his pen, on this subject, will, unquestionably, be perused with interest and attention, by all who duly estimate the importance of this crop, not only as it respects our farmers individually, but the interest of the State generally. If his theory is correct, our limestone ledges, will, with little labor, furnish us abundantly with one of the remedies which he prescribes, and become a much greater source of profit than they have heretofore been.

"The reason why the lands in New-England, which formerly yielded wheat surely and plentifully, suffer at the present time such injuries from the blast, as in a great measure to discourage farmers from attempting to cultivate it, has been anxiously and extensively sought for, but not, it is believed, satisfactorily discovered.—From my own observation, and inquiries, I have been induced to attribute this evil to the agency of animal manure. This subject has been already mentioned in my observations on the county of Worcester: it shall now be resumed.

The manner in which *Wheat* is generally blasted in New-England, appears to me very evidently to be this. During the months of June and July, when the kernels of wheat in the different climates of New-England are in the milk, the vegetation is far more rapid than in most countries of Europe. Whenever the season at this period is both moist and hot, the rapidity becomes extreme. The vegetable juice, ascending then in too great quantities, and with a new celerity, wears with difficulty through the vessels of the stalk, regularly lessening towards the neck, and at that time so tender as to be easily ruptured, bursts them in various places; particularly at the neck; and flows out upon the surface of the stem. When it first exudes, it is very sweet to the taste; and has hence been commonly supposed to be the residue of a particular kind of dew, called by the farmers *honey dew*. Had any farmer recollected, what he cannot fail to find when he finds a honey dew, that it never appears on any thing beside living vegetable, and that, if it were a dew, it must be found equally on every other substance exposed to the atmosphere; he would certainly have determined, that it was merely the sweet juice of the vegetable itself. When this juice has pervaded the stalk, it soon becomes sour in the sunbeams; then so acid, as to corrode the stalk; and finally a rust, (as it is commonly called,) of a brown hue, and an offensive smell.

Animal manure, beyond any other accelerates vegetation. Wheat nurtured by this manure, grows with so much rapidity, and with so tender a stalk, that in the agricultural language of this country, *it lodges* not unfrequently, (i. e. it falls under the pressure of wind or rain) by its own weight; and never recovers its original position. This dangerous process is peculiarly advanced by the use of this manure; and the rapidity of vegetation otherwise too great, is by this substance rendered still greater. Hence all fields, when this manure is employed, are peculiarly exposed to blast. For a few years after lands are dressed with it the evil is so evident to the eye of common observation, as to be not unfrequently believed to exist by some farmers, and suspected by others. Were every season hot and wet, during this period, it would, I doubt not, have long since been generally realized and acknowledged. But as in some seasons these months are cool and dry; and those fields which have been dressed with this manure, then yield wheat successfully; and as in the most unfavorable seasons, lands dressed in a different manure, are also subjected to the blast; the question has hitherto failed of any answer, which has been generally satisfactory.

The reasons, which have induced me to adopt the opinion here alleged, are principally the following:

1. All the lands in this country, which were not too wet originally yielded wheat, easily,

surely, and so far as they were rich, abundantly. The inhabitants of North-Hampton for many years paid their public tax in wheat; and this wheat grew on the very lands, where for a long period it has been supposed to be so uncertain an object of culture, as to be scarcely worth the attempt, i. e. on Intervales.

2. New lands yield wheat perfectly well in most parts of this country at the present time. Some farmers believe, that there is such a change wrought by time, either in the climate or in the soil, independently of the proper effects of culture, that the blast is to be attributed to this change. Although this is a mere supposition, supported by no evidence, it has still had its weight. But it is entirely refuted by the fact, mentioned under this head. Lands in the same circumstances yield wheat as abundantly at the present time, as at any former period. It deserves to be remembered, that all the Intervales along the Connecticut have furnished some crops of this grain for a considerable time after they first began to be cultivated.

3. Lands dressed with ashes, now furnish fine crops of wheat, which is rarely or never blasted. The only reason why the crops on new lands are so safe from the blast, is, that they are covered with vegetable mould; another name for vegetable manure; and so long as the efficacy of this manure lasts, are dressed with no other. It is the universal tendency of this mould to produce great crops; but it produces them by a gradual and moderate vegetation.—Ashes, which are the same manure in another form, produce the same effect in exactly the same manner. Accordingly, although the crop of wheat, yielded by grounds dressed with ashes, is abundant; yet the stalk is firm, and strong; much stronger but much shorter than that produced by animal manure, and equally safe from lodging, and blasting, as that which grows on vegetable mould.

It ought to be observed, that in grounds, where the vegetable mould is very deep and abundant, wheat grows so rapidly as to be universally blasted. That this effect is solely derived from the redundance of this manure is certain, because the same lands after the cultivation of a few years, yield wheat perfectly well.

4. In various instances, which have fallen within my knowledge, wheat, sown after clover, has been perfectly free from any injury by the blast; and that on Intervales, and other lands most liable to this injury. Here vegetable manure has been employed in another form; yet the same effect has been produced.

5. Lands, dressed with gypsum, have been equally favorable to wheat. This good effect has, however, been commonly produced through the medium of clover; the gypsum having been first employed for the production of this plant, and the wheat having been sown after the clover had been ploughed in.

6. Fields, manured with the white fish, have yielded wheat, universally, in great abundance, and with almost absolute certainty. This is indeed animal manure also; but very different from that, which I have introduced by this phrase above; viz. that of the stable and barnyard. The white fish is a species of herring, very fat and oily, and remarkably favorable to vegetation of every kind, which is the object either of agriculture, of horticulture. I have mentioned this fact, to show, that the evil complained of, has its origin neither in the soil, nor in the climate; but in the particular mode of cultivation, which I have mentioned as its proper cause.

7. The lands in Pennsylvania, which yield plentiful crops of wheat, are regularly dressed with lime, or gypsum; and neither here nor in those old settlements in the State of New-York where this grain is least exposed to the blast, are cattle very numerous. Of course the kind of manure, which I suppose to be noxious to this plant, cannot abound in these countries. I am informed also, that, when this manure is used, it is generally mixed with other substances in *a compost;* and converted, either partly, or wholly, into mould, before it is employed as a dressing. It ought also to be observed, that a great part of the wheat lands in these countries are clay; and that the process of vegetation may be therefore materially different from that, which exists in New-England, where the soil is principally loam with a mixture of gravel. It is however said, that in Pennsylvania their crops fail, when they are unable to dress the lands in lime, or gypsum.* It is also said that the lands along the Mohawk River, which have heretofore yielded wheat with great certainty, as well as luxuriance, are gradually becoming less and less fitted for this kind of culture.

I have been informed that at Newbury they have lately adopted a new kind of husbandry, by means of which the crops of wheat are no less sure, and prosperous, than they were formerly. What this mode is, I have not, however, been able to learn.

In my own belief, animal manure produces this noxious effect long after it has ceased to enrich the soil. Although its influence has in this case become small; yet, so far as it extends, it is mischievous; and may, at the dangerous period above mentioned, accelerate a growth, at least sufficiently rapid otherwise, so as to produce the evil in question. Thus I consider grounds, long devoted to pasturage, as being injurious to the culture of wheat as really, though in a less degree, as those which are manured from the stable in form.

It ought, however, to be observed, that since the Hessian fly has rendered it impossible to cultivate what is here called *white bald wheat*, we have lost the species best fitted for the soil and climate of New England, as well as that which furnishes the best bread. All the substitutes for this wheat have yielded inferior crops; have been more exposed to the blast; have been more injured by the frost; have weighed less; and been of an inferior quality.

Should these observations be allowed to merit the attention of farmers in this country, it would certainly be worth an experiment to see how far the use of vegetable and mineral manures, would remedy this very serious evil.—Were lands, intended for the culture of wheat, to be employed for this purpose during a considerable period; were clover or other vegetable substances, or, where they can be obtained, mineral manures, to be alone employed as the means of enriching the soil, I am persuaded my countrymen would again see their crops of this grain not less sure, less abundant, nor less general, than they were in former times."

* This remark, and indeed the whole tenor of the article has a tendency to confirm what we have observed in No. 12, pp. 91, 92, of the N. E. Farmer, relative to the necessity of lime, in some of its combinations, to insure the production of wheat. Fish makes a useful manure for wheat, because it contains, together with other food for plants, *phosphate of lime*, in greater quantities than most animal substances.

Ed. N. E. Farmer.

From the Farmers' Weekly Messenger.

SIGNS OF A GOOD FARMER.

His corn land is ploughed in the fall—His bull is from two to five years old and he works him. He seldom lets his work drive him. Has a cooking stove with plenty of pipe to it. The wood lots he possesses are fenced. His sled is housed in summer, and his cart, ploughs and wheelbarrow, winter and summer when not in use; has as many yoke of good oxen as he has horses—Does not feed his hogs with whole grain—Lights may be seen in his house often before break of day in winter—His hog-pen is boarded inside and out—Has plenty of weeds and mud in his yard in the fall—All his manure is carried out from his buildings and barn yard twice in the year, and chip dung once a year—His cattle are almost all tied up in the winter—He begins to find out that manure put on land in a green state is the most profitable—Raises three times as many turnips and potatoes for his stock as he does for his family—Has a good ladder raised against the roof of his house—Has more lamps in his house than candlesticks—Has a house on purpose to keep his ashes in and an iron or tin vessel to take them up—He has a large barn and a small house—seldom has more pigs than cows—adjoining his hog-pen he has a hole to put weeds and sods, and makes three loads of best manure from every old hog and two from every pig. A good farmer in this country begins to find out that steaming vegetables can be done at one third the expense of boiling, and that the Ruta Baga turnip is a thing worth thinking of—he fences before he ploughs and manures before he sows—He deals more for cash than on credit.

HABITS OF CATTLE WITH RESPECT TO FOOD.

It has been observed by some American writer upon Agriculture, that American Cattle were not so fond of turnips, ruta baga, and some other plants not generally cultivated for feeding stock in this country, as it should seem that English cattle were. This apparent squeamishness of our native breed of cattle may be accounted for by any one who will make a proper application of the following passage from Anderson's Essays on Agriculture, vol. ii, p. 6.

"Although it may be presumed, that in general, instinct points out to animals the plants that are hurtful to them or the reverse; yet experience sufficiently shows that this cannot be relied on as an invariable guide—among domestic animals at least; which, by having little freedom of choice from their infancy, have their taste in all probability depraved, as well as our own. I have seen oxen that on no account could be brought to eat turnips; and there are very few put upon them, who do not eat them at first with some degree of reluctance, if they have not been sometimes accustomed to taste them before; yet it is very well known, that few kinds of food are more nour-

ishing and palatable to cattle, after they have been accustomed to it."

The following from the *Farmer's Assistant*, will show that instinct is not an infallible guide for *horses*, as respects the food which is best adapted to their nourishment.

"Pumpkins are excellent for fatting horses. *They, however, do not relish them at first;* and therefore must be kept from feeding, till they are hungry, before the pumpkins are offered to them; and let a little salt be first sprinkled on this food, when they will soon grow fond of it and eat it readily, without salt."

If "hunger makes good sauce for horses," no doubt it would answer for cattle, and might make the latter relish turnips as well as the former pumpkins. But cattle or horses fed upon pumpkins, turnips, or any such succulent food, or upon green clover, &c. should be salted more liberally than those, which are confined to hay or other dry food.

From the American Farmer.

Improvement of Neat Cattle—Pedigrees of Imported Animals, &c. &c.

We have witnessed with peculiar pleasure, the persevering and praiseworthy zeal which Col. Jno. H. Powell, of Philadelphia, continues to manifest for improvement of our breeds of Neat Cattle; as well by judicious selections from our native stock, as by the importation of chosen animals from England.

In No. 6, of this Vol. page 48, we published a list of animals, which he had collected chiefly from the Eastern States, for the purpose of exhibiting them in Pennsylvania, and distributing them *at cost*, amongst the Farmers of his native and other states. And in No. 16, pages 122—3, our readers will have noticed an official account of the exhibition, made by the same gentleman, of some of those animals, and of other native and imported stock, before the Philadelphia Agricultural Society, for nearly all of which premiums were awarded to Col. Powell, that were instantly and generously relinquished by him, for the benefit of the Society.

In the same number, the effects of this gentleman's judicious and spirited efforts, to advance the interests of his neighbours, may be traced through the list of premiums obtained by them for superior young Neat Cattle, that partook of the blood of the improved breed, which he had brought to their notice and placed at their service.

We rejoice to learn that Col. Powell has ordered some more animals from England, and hope that he may realize his loftiest expectations from the enterprize. From Mr. Wetherill, the breeder of Mr. Williams' celebrated Bull "Denton," and from Mr. Champion, the breeder of Colonel Lloyds' beautiful and promising Bull "Champion," he may justly expect to receive some of the most improved cattle of Great Britain. And no where could such Stock be better placed than within the reach of Pennsylvania Farmers; who, like their judicious fellow citizens of Massachusetts, will gladly embrace every opportunity to improve the breeds of their Neat Cattle.

And that all may hereafter avail themselves of the offspring of such animals as prove to be the best of their kind, we have proposed to record the pedigrees of imported and celebrated stock, which we will thankfully receive from owners, or others who possess such information, and carefully register it in our columns. We are indebted to Col. Powell for the following pedigrees of two very valuable imported animals, and two others of imported breeds.

PEDIGREES.

FLORA, (an imported thorough bred improved Durham Short Horn Cow) was by Sampson—dam was Betty—grandam Old Betty, who came from the neighbourhood of Darlington, Durham County, England—Sampson was by son of Ossian—Ossian was by Favorite—Sampson's dam was by Comet—Comet was by Favourite.

ROSE is also a thorough bred improved Durham Short Horn Cow, and was purchased near Darlington.

LOTHARIO, a bull of 7 months, was from Rose, by George—George was by Phenomenon—dam by Favorite—grandam by H. Allison's Gray—great grandam by T. Charge's Old Gray—Phenomenon was by Favorite, from Elvira, bred by Sir H. Vane Tempest—Elvira was by Old Phenomenon, from Princess, both bred by Robert Collings—Princess was by Old Favourite.

CORA, was by Mr. Williams' bull Denton, from Julia—Julia was by Denton, from Mr. Williams' imported cow Devon—Denton was by Old Denton—dam by Baronet—grandam by Cripple—great grand dam by Irishman—Old Denton was by Comet.

THE FARMER.

BOSTON:—SATURDAY, NOV. 23, 1822.

ON SAVING AND MAKING THE MOST OF MANURE.

(*Continued from page* 111.)

It has generally been taken for granted, by those who have considered themselves as adepts in the science of agriculture, that the great store-house of nature contained, in some corner of the apartment, a very valuable substance, called *food for plants*. This they supposed to be the essence of all manure, and the only thing needful, in order to raise, on any soil to which it might be applied, as great crops as could possibly find room for their tops and footstalks. They therefore set about exploring and experimenting, rummaging and ravaging the animal, vegetable and mineral kingdoms in search of this magical substance, this farmer's philosopher's stone, which would metamorphose a desert into a flower garden as it were by the wand of a necromancer. At length certain philosophers verily believed, and told the world their opinions, that they had found the identical *pabulum of vegetation*, as they called it, and that agriculturists had nothing to do but to manure their fields with the said pabulum in order to procure the best and most profitable of all possible products. But, unfortunately, it so happened that no two, or at least no half dozen of these learned and ingenious system-makers could agree upon the nature and constituent parts of this appropriate diet for vegetables; and of course the said vegetables were obliged to pick up a living as they could, while their philosophic caterers were preparing messes precisely adapted to their appetites and constitutions.

Duhamel and Tull were of opinion that the *earth* in which plants grew, furnished their principal food. That in order to enable their little mouths, (which were placed in their roots) to imbibe their nourishment, the soil must be ploughed and harrowed till you had almost demonstrated the infinite divisibility of matter by actual experiment. If the food of vegetables was reduced to an impalpable powder, as much finer than snuff as snuff is finer than grape shot, they imagined it would be more easily swallowed and digested, than if it remained all kneaded together, or its particles were congregated in course lumps, which plants could neither carve into particles of a proper size for deglutition nor take in and decompose or digest without division.

Van Helmont and many other men, who have been famous in the annals of philosophy, were confident that *water* is the one thing needful for the growth of every species of vegetation, and that the soil, in which plants are fixed is no otherwise useful than as it serves to sustain them in an upright position and to convey water to their roots in such quantity as may be adequate to their wants. Very many able writers have adopted this theory, and it would seem that even at this day it is not without its advvocates.*

* Lord Kaimes was of this belief which he fortifies by the authority of Lord Bacon, who, he observes, "gave his opinion, that for nourishing vegetables, water was almost all in all; and that the earth serves but to keep the plant upright, and preserve it from too much heat, or too much cold."

Gentleman Farmer, p. 363.

More modern writers have also given some countenance to this theory, as may be learned from the following note from Parkes' Chemical Catechism, p. 458, 10th edition.

"That vegetables will grow in woollen cloth, moss, and in other insoluble media, besides soils, provided they be supplied with water, has been repeatedly shown since the days of Van Helmont and Boyle; but the experiments of a modern author, from their apparent correctness, seem more highly interesting and conclusive.

"Seeds of various plants were sown in pure river-sand, in litharge, in flowers of sulphur, and even among metal, or common leaden shot; and in every instance nothing employed for their nourishment but *distilled water*. The plants throve, and passed through all the usual gradations of growth to perfect maturity. The author then proceeded to gather the entire produce, the roots, stems, leaves, pods, seeds, &c. These were accurately weighed, dried, and again weighed, then submitted to distillation, incineration, lixiviation, and the other ordinary means used in a careful analysis.—Thus he obtained from these vegetables all the materials peculiar to each individual species, precisely as if it had been cultivated in a natural soil,—viz. the various earths, the alkalies, acids, metals, carbon, sulphur, phosphorus, nitrogen, &c. He concludes this very important paper nearly in these extraordinary words: "*Oxygen* and *hydrogen*, with the assistance of solar light, appear to be the only elementary substances employed in the constitution of the whole universe; and Nature, in her simple progress, works the most infinitely diversified effects by the slightest modifications in the means she employs." See "*Recherches sur la Force assimilatrice dans les Vegetaux*," par M. Henri Braconnot, *Annales de Chimie*, Fev. et Mars, 1808.

"Professor Leslie has made many experiments on a variety of earths and stones by means of his improved hygrometers, the results of which are highly deserving the attention of all practical agriculturalists. From these researches he has been induced to think it probable, that the fertility of soils depends chiefly on their disposition to imbibe moisture. See his *Short Account of Experiments and Instruments depending on the Relations of Air, Heat, and Moisture*, octavo, pages 94—102."

Notwithstanding plants can be made to grow in pure water, that circumstance does not prove that water is *exclusively* food for vegetables, any more than their growing in air (as some vegetables will) would prove that element to be their appropriate food. It might as well be said that the possibility of fatting an ox on potatoes is an incontrovertible argument that potatoes are the principal and almost the exclusive food of animals. Although plants may have power to change

Dr. A. Hunter, the author and compiler of several volumes of Georgical Essays, many of which contain very useful observations, and facts, which are the heralds of much agricultural science, thought that he too had discovered the genuine food of plants. "I lay it down, he observed, as a fundamental maxim, that all plants receive their principal nourishment, from oily and mucilaginous particles, incorporated with water, by means of an alkaline salt, or absorbent earth. Till oil is made miscible, it is unable to enter the radical vessels of vegetables, and on that account Providence has bountifully supplied all natural soils with chalky or other absorbent particles." Experiment, however, the only infallible touchstone of theory, at length convinced Dr. Hunter that the cheapest oil was a very dear, but not very efficient article in a manure or compost heap; and oil, considered as a pabulum of vegetation, was held in no higher estimation than the substances which it had superseded.

The atmosphere had the honor of being next promoted to the office of purveyor of plants, and victualler of vegetation. The whole vegetable kingdom, from the cedar of Lebanon to the moss upon the wall, from the oak of the forest to the parasitical plant, which, according to Sir Joseph Banks, battens upon the stalk of wheat, and causes mildew, was fed on air like a camelion; and manure derived all its utility from its attraction for the atmospherical pabulum, or panacea. That air does contain food for plants is evident from the circumstance that the house leek and various sorts of mosses will increase in weight without the aid of water or earth. But there are some other substances which appear to possess it in greater quantities, and better prepared for the purposes of vegetation. Thus a plant, which is partly withered in the air, may be revived by being sprinkled with water, and water slightly impregnated with muriate of soda, [common salt] and perhaps some other saline substances, will preserve vegetables from drooping longer than pure distilled water. At any rate, it is pretty evident that the atmosphere is not a very *rich* food for vegetables, because it robs a manure heap of its fertilizing qualities, although it communicates such qualities to a hungry loam. It is like a pint of water about half saturated with common salt, which by mixture will make a quart perfectly fresh water somewhat brackish; or if the quart of water was fully saturated with salt, somewhat more fresh. In other words, the atmosphere causes very rich land to become poorer, and very poor land to become richer, and can with no more propriety be said to constitute the food of plants, than earth can be said to constitute the food of mankind, because some savages in South America are said to support nature, in times of scarcity, from a sort of fat loam or mould which they dig up and swallow.

While philosophers were thus floundering on from one deep abyss of error to another still deeper, Chemistry came forward, and proffered its lamp to guide their feet. By analysing vegetables, chemists professed to ascertain, precisely, what kind of matter entered into their composition, or, (to express the same thing in more familiar terms) what sort of stuff they were made of. The simple substances which they found in plants are principally oxygen, [vital air] hydrogen, [inflammable air] and carbon [coaly matter.] Some others are found in smaller quantities, such as phosphorus, lime, silica, &c. &c. and seem to be rather accidental additions than substances which are indispensable to their existence.* These few simple elements, by being variously compounded and modified, produce gum or mucilage, starch, sugar, albumen, gluten, gum elastic, extract, tannin, indigo, narcotic principle, bitter principle, wax, resin, fixed oil, volatile oil, woody fibre acids, alkalies, &c. &c. When these premises were once established, and it was discovered that nearly all the substance o all plants was hydrogen, oxygen, and carbon, it followed, as Sir Humphrey Davy has expressed it, that "no one principle affords the pabulum of vegetable life s neither charcoal, [coaly matter] nor hydrogen, [inflammable air] nor azote, [the elastic substance which forms a great part of the atmosphere and which is incapable of supporting combustion] nor oxygen, [vital air] alone; but all of them together in various states, and various combinations."†

We believe that this theory of Sir Humphrey Davy is the most correct of any which has been advanced, and hope, in a future number, to deduce from his principles some results which may prove of practical utility.

(TO BE CONTINUED.)

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oxygen and hydrogen into "the various earths, the alkalies, acids, metals, carbon, sulphur, phosphorus, nitrogen," &c. it would probably be more convenient for said vegetables to be fed with food, which contains such products as enter into their composition and make a part of their substance, ready manufactured, than to be under the necessity of manufacturing the whole from oxygen and hydrogen, which M. Braconnot appears to believe are the primitive particles, or raw materials from which the universe was constructed.

Some remarks by Mr. Cooper, Editor of the last American edition of Dr. Willich's Domestic Encyclopedia, would appear to strengthen the conclusion of M. Braconnot.

"In the case of the decomposition of animal substances, whether in the dry, or the moist way, no acid appears: we get azote, a fœtid animal oil, swimming at the top of a volatile alkaline liquor, and sometimes concrete volatile alkali, or carbonate of ammonia comes over. The retort contains an animal charcoal, consisting of azote, carbon loosely combined, the base of the prussic acid, and if bones be used, phosphate of lime.

"In this case, the azote, the lime, and the phosphorus, seem to be new combinations, the result of animal organization, modifying chemical affinity. There are many districts of Pennsylvania, perhaps the best pasture land in it, that do not contain a particle of limestone. Such for instance as a great part of the county of Luzerne, and the beech country comprehended between the north-east branch of Susquehannah, the N. York state line and the Delaware. There is no finer grass country; but lime-stone is rare throughout the greatest part of this space. A calf bred up there, will have *bones*, that is phosphate of lime; his flesh will yield *azote*, either by distillation, or by the nitric acid. Where does he get it? The soil contains none; the grass on which he feeds contains none, but the ox is chiefly composed of azote and phosphate of lime!"

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* It is thought, however, that lime and silica are indispensably requisite for the existence of some plants, in which they are always found by analysis.

† See Agricultural Chemistry, lecture 1, p. 18, Baltimore edition.

Col. Powell's Improvements in the Breeding of Cattle.

We have republished in this day's paper, p. 134, an article from the American Farmer, headed "*Improvement of Neat Cattle*," with much satisfaction; and are happy in an opportunity of expressing our sense of the merit which attaches to such exertions of wealth and talent to become useful as well as eminent. Colonel Powell is well known in Massachusetts as a liberal and enlightened Agriculturist, and his efforts to promote the interests of those who cultivate the soil will be as highly appreciated in New England as in Pennsylvania.

Mr. Fick, of New York, selected from an half acre of cabbages, 7 heads, which weighed 134 pounds.

American Talent highly appreciated in Europe.—Dr. Rush's Medical Enquiries; Dr. Wistar's Anatomy; Seaman on Vaccination; Chapman's Therapeutics; Bigelow's Botany and Potter on Contagion, have been republished in Great Britain; and the last mentioned having gone through several London editions has been translated into French, and published at Paris, and into German, and published at Leipzig.

The town of Bristol (England) is to be lighted with gas. A capital of 30,000 pounds has been subscribed by a company for this purpose.

A serious misunderstanding exists between the Prince of Brazil and the Portuguese Cortes. The former has shewn a disposition to render his government independent of the mother country, and the latter have decreed that the delegated authority of the Prince shall immediately cease, and that he shall return to Portugal in the course of four months.

Havana is said to be greatly infested with robbers, who commit nocturnal depredations, keep the inhabitants in a state of constant alarm, and are sometimes too powerful for the control of the police.

A profitable commerce is now carried on between some of the ports in the Southern states and the West India Islands belonging to the British. The Raleigh Register says, "one small vessel carried out a cargo of timber which cost $500, and returned with West India produce worth $3,000."

A dreadful storm has occurred in the neighborhood of Calcutta, in which from 16 to 17,000 houses were destroyed, and more than 12,000 men, women and children. The loss in cattle, grain, &c. was also very great; and those who escaped the inundation are threatened with famine.

Poison.—Mr. Edmund Jukes, a surgeon of Westminster, Eng. has invented an apparatus by which the stomach may be emptied of poison, received by accident or design. After trying it on various animals with complete success, he experimented on himself—and swallowed ten drachms of laudanum, from which he was promptly relieved.

A foot race between a Yorkshire-man and a Lancashire-man was lately run at Doncaster. The purse was 20 guineas. The Yorkshire-man won the race by 100 yards. Time, 20 minutes and 35 seconds, for 4 miles.

Longevity.—There is now living in the state of Ohio a poor old woman, named Ann Bailey, who is supposed to be about *one hundred and twenty years old*. She was about 12 or 13 years old, when Queen Anne of England died, after whom she was named. She still retains so much health and strength as to sometimes attend market with a few fowls, &c. making a journey on foot of about seven miles to dispose of her articles, which she carries on her back.

Since the first of January, sixty-seven of the officers of the U. S. Navy have died.

At Schenectady, N. Y. *Fair*, a bull calf was exhibited, for which the owner refused to take $250.

Miss Harrison, of Amenia, N. Y. has made an imitation Leghorn for which she was offered $150. She was ten weeks in completing the work.

M. Guy Duplantier, of Louisiana, has invented a machine for making bricks, which, it is said, will do as much work as 30 men. Also, another machine for piercing or morticing fence posts, in which he applies the power of horses, as it is said, to great advantage.

Rot in Cotton.—A Mississippi Cotton Planter, who was curious enough to watch the motions of a species of bug hovering round the cotton trees, has published, in the Port Gibson paper the result of his observations, by which it appears that the *rot in cotton* is caused by the *sting of a bug*, which, piercing the tender covering of the bowl, in its unripe state, produces, in the course of three days, the decay of the bowl.

Gigantic Vegetable.—A beet which grew in the garden of Mr. Daniel Kramer, of Northampton, Pa. and which is now to be seen at his house, weighs *fifteen* pounds and a half, and measures at the thickest part *thirty-four* inches and a half, and somewhat lower down, twenty-seven inches. Who can beat this?

Philadelphia Union.

Ans. Massachusetts, N. Hampshire, and we believe every state in New England can beat the Pennsylvania beet all hollow. Mr. Leonard Pratt, of Pembroke, N. H. raised a beet weighing 22 pounds, and Mr. E. N. Chadwick, of Hanover, Mass. a beet which weighed 21 pounds. Therefore the Pennsylvania beet is by no means the beat of all beets.

FOR THE NEW ENGLAND FARMER.

THE SCOLDING WIFE.—A Sentimental Sonnet.

Hoarse thunder howls, blue lightning flashes,
Against the stars vex'd ocean dashes,
Earth, sky and sea, fire, water, air,
Like tipsy Irish, at a Fair,
Are all engag'd in one great clatter,
And every particle of matter
Seems warring wild with every other
To make one universal pother!
The great globe rent, the chasm displays
All Pluto's regions in a blaze,
Earthquakes have split the pole to shivers,
And all the solar system quivers!
But surely this vast elemental strife
Is naught contrasted with a scolding wife.

FOR THE NEW ENGLAND FARMER.

A special good reason for Self-Puffing.

Jack is a curious kind of elf,
Who, though he likes to puff himself,
Does it from principle, not pride;
He knows his worth, like insect small
Can never be discern'd at all,
Unless 'tis greatly *magnified*.

FOR THE NEW ENGLAND FARMER.

IMPROMPTU,

On seeing a purse-proud blockhead taking a solitary airing in his own coach.

Things have come, now-a-days, to a pitiful pass,
Since it takes two fine horses to draw one vile ass!

Private happiness is the only sure and permanent basis of public prosperity.

Every day feelings and fire-side enjoyments decide the tenor of our lives, and he who values them most plays the best stake for happiness.

Madam Terein, a lady of erudition and discernment, gave to Marmontel, when he was a young man, a piece of advice with respect to the management of authorship, which ought to be a perpetual lesson to all writers by profession. "Secure yourself," said she, "a livelihood, independent of literary successes; and put into the lottery only the overplus of your time; for wo to him who depends solely on his pen!—nothing is more casual. The man who makes shoes is sure of his wages; but the man who writes a book is never sure of any thing."

It is not necessary in order to be an agreeable companion that you be either eloquent or witty, or possessed of any rare or superior talents; all that society demands of you is that you be complaisant without meanness, polite without flattery, steady without rudeness, and cheerful without affected gaiety.

Court the company of the learned, and the conversation of the aged; their discourse is often more useful than any book you can read.

It is a sure sign of want of wit, when one is always attempting to shew it.

The matrimonial blacksmith of Gretna Green, having bound an old lady, and a youth of unrazored chin in the silken bands of matrimony, observed to a friend, "I have just tied a withered stick and a green twig together with a cobweb."

From the Connecticut Mirror.

The Hon. Tristram Burges, of Providence, delivered an Address in August last, to the R. I. Society for the Encouragement of Domestic Industry, and a copy has been sent by Messrs. Miller & Hutchens, to the Hartford County Agricultural Society. The following is part of it:

"I fear we shall find, we are, taken in a mass, about such farmers as our forefathers were when they migrated to this country. They, we know, were such farmers as their fathers were when they left England. But all the capital improvements in agriculture, have been made, in that country, since the settlement of this.

If it were in the course of nature for the venerable pilgrims of Plymouth, again to land on the shores of that island, they would not know the fields of their native country. Not many years before they migrated, the London market was supplied with vegetables from Flanders, and the English climate and soil were deemed incapable of producing them. At this time, 14,000 acres are appropriated to gardening in the immediate neighborhood of that metropolis, and the vegetables and fruit raised on those lands are sold in that city for a sum little short of four millions of dollars per annum. The rent of land in the county of Norfolk, the least fertile, but the best farmed district of England, has increased within the memory of man, eight fold. The rent roll of Mr. Coke, the great Norfolk farmer, has, in that time, risen from five to 40,000*l.* per annum. This has been done, not by grinding his tenants, but by enriching them; by granting them leases of his lands for twenty years; and by giving them, in his own farming, a great example of the immense agricultural improvements which may be made, even in the sands of Norfolk, by industry, skill and capital.

Scotch farming has come into existence, long since Roger Williams paddled his canoe round Fox Point. In those days, the Thistle was the national emblem of Scotland. They fought under it in war, and foraged upon it in peace. But the unpoetical farmers of Caledonia have lost all delight in pursuing the thistle's beard, with the heroes of Ossian; or sleeping on the blooming hether with the buccaniers of Roderick Dhu. They have ploughed down all those things, which look so pretty, and smell so sweet in song, and given up those haunts of the muses to plain English barley and wheat; Dutch and Swedish turnips; the clover of Flanders, and the Shamrock of Ireland. In the progress of these improvements, these men have done, what Scotchmen think an essential service to that country; but what American farmers would think a curse to this—they have, by increasing a demand for labor, nearly doubled the price of it; but these industrious, intelligent Scotchmen, with their national prudence, have contrived, not only to pay this augmented price of labor, but to replace all their capital, and add to it, at least fourteen per cent. per annum. A farmer in the Lothians of Scotland, who cultivates 700 acres of land at a rent of 1*l.* 10*s.* sterling per acre, will, at the end of the year, have in his pocket, clear of all expenses, more than $3,500. He has so much to add to his capital, and to enable him to extend his cultivation."

From the Plymouth (England) Telegraph.

We last week noticed an invention by a gentleman of Plymouth for conveying the electric fluid by means of a copper conductor fixed in the masts, through the bottom of ships. Instead of being ascribed to Mr. T. Harris, Jr. as then stated, it should have been Mr. W. S. Harris.—The experiment took place on Monday last, on board the Caledonia, in the presence of the Navy Board, Sir A. Cochrane, Commissioner Shield, several Captains in the Navy, and the principal officers of the Dock-yard, in the following manner: The Louisa cutter having had a temporary mast and topmast fitted with a copper conductor, according to Mr. Harris's plan, was moored astern of the Caledonia, and at the distance of eighty feet from the cutter a boat was stationed with a small brass howitzer. On the tiller-head of the Caledonia were placed the electrical machine and an electrical jar, with the outer coating of which a line was connected, having a metallic wire woven in it; this line being carried out of the starboard window of the wardroom, terminated in an insulated pointed wire in the immediate vicinity of the touch-hole of the howitzer: a similar line was passed from the larboard window, which communicated with the mast-head of the cutter, and at the termination of the bolt through the keel a chain was attached, connected with another insulated pointed wire in the boat, placed in the vicinity of the touch-hole—the space between the insulated points being the only interval in a circuit of about 300 feet, from the positive to the negative side of the jar. Some gunpowder being placed in contact with the conductor in the cutter, and the priming in the interval of the insulated points, the jar was charged, and the line attached to the mast-head of the cutter being brought into contact with the positive or inside of the jar, a discharge of electric matter followed, which was passed by the line to the mast-head, and by the conductor through the powder to the chain in the water, by which it was conveyed to the interrupted communication in the boat, where it passed in the form of a spark, and discharging the howitzer, returned to the negative or outside of the jar by the line leading into the starboard window, thereby demonstrating that a quantity of electric matter had been passed by the conductor through the powder (without igniting it) in contact with the mast of the cutter, sufficient to discharge the howitzer. Mr. Harris then detached the communication between the keel of the cutter and the positive wire in the boat, leaving that wire to communicate with the water only; but this interruption did not impede or divert the charge, as the discharge of the howitzer was effected with equal success as in the first instance, the water forming the only conductor from the cutter to the boat. In order to demonstrate that a trifling fracture or interruption in the conductor would not be important, it was cut through with a saw; but this produced no material injury to its conducting power.

These trials, carried on under the disadvantages of unfavorable weather, could not fail of convincing all present of its efficacy, and called forth the decided approbation of the Navy Board in particular, which was evinced by Sir T. B. Martin requesting Mr. Harris to superintend the equipment of the Minden 74, and Java frigate, preparatory to its general introduction into the navy.

The science of love is the philosophy of the heart.